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Digital Media Literacy as a Precondition for Engaged Digital Citizenship

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Key Points

→ As digital media tools have become essential to acting on and communicating about civic issues, and networked platforms have become the primary fora for political discussion and action, digital media literacy has become a precondition of civic engagement and freedom of thought.

→ Some features of networked digital media complicate the development of digital media literacy because of their lack of transparency; their influence and decision making are opaque to users and may even be so to their designers.

→ To ensure an informed and engaged public, we need a commitment at both federal and provincial/territorial levels to update and support digital media literacy in all of its aspects — from guaranteeing access to empowering civic engagement — in both youth and adults.

Introduction

Digital media literacy — the ability to critically, effectively and responsibly access, use, understand and engage with media of all kinds — is an essential part of civic engagement. The advent of inexpensive and portable tools for making media, along with networked platforms for distributing it, has made it possible for nearly anyone to make and distribute their own media works; and for people to find allies, to organize, and to share their opinions on civic and political issues as broadly focused as the conflict in Israel and Gaza (Molloy 2023) or as narrow as school lockdown drills (Carillo and Lee 2023). Beyond using digital tools to participate in civic engagement, digital spaces are more and more where civic and political engagement *happen*. Mainstream online spaces such as Facebook, YouTube and TikTok, as well as more niche platforms such as Reddit and WhatsApp, now play significant roles in determining what ideas are seen as falling into Daniel C. Hallin's spheres of news journalism and its rhetorical framing: consensus, deviance and legitimate controversy (Hallin 1989, 116–18). For young people in particular, these online spaces are also frequently communities with norms and values that may be as important in shaping their views as mass media or the offline communities they are a part of.

The role of networked digital media in civic engagement is a mixed blessing. Too often, the norms and values of these online spaces tolerate or even encourage misogyny, homophobia, transphobia, racism and

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other forms of bigotry and harassment. Similarly, the democratization of media production and distribution, which allows previously unheard voices to bypass the traditional media gatekeepers, provides a vehicle for disinformation and hatred as well (Greenspon and Owen 2018). Moreover, with the diminishment of those gatekeepers' role, the onus is now placed on each citizen to decide whether or not to trust — and potentially amplify — each message. Networked media brings together hate groups and conspiracy theorists, leading to a growing overlap between groups as previously disparate as White supremacists and anti-vaccination communities, a phenomenon referred to by some researchers as the "hate multiverse" to reflect its interconnections and the many routes into it (Velásquez et al. 2020).

Despite all this, there are reasons to think the shift from a broadcast media environment to a networked digital environment is, on balance, positive for civic engagement and freedom of expression. One reason is simple numbers: MediaSmarts' research with young people shows a strong and growing consensus on the importance of pushing back against racism and sexism online (MediaSmarts 2022), which is essential in preventing hostile online spaces and the "spiral of silence" they may cause among marginalized communities (Olson and LaPoe 2017). Further, members of groups whose voices are traditionally under-represented in the broadcast model, such as persons of colour, are more likely to see networked media as being a valuable source of information and a vehicle for activism (Auxier 2020). Finally, there is extensive evidence that digital media literacy promotes positive civic engagement online: young people with higher levels of digital media literacy are better able to evaluate online information (Hodgin and Kahne 2018) and more likely to join or support an activist group online or post content about a cause or event they care about (MediaSmarts 2023a).

The problem is that the playing field is not even. While the *networked* nature of these communication technologies may be positive for civic engagement, their *digital* qualities may have the opposite effect because they are liable to be both more manipulative and less transparent than analogue media. While manipulative or persuasive design is by no means unique to the digital world — grocery stores, for instance, are carefully designed to steer customers to the highest-margin items (King 2022) — it is more powerful in digital media because we *use* them rather than simply consume them (Davis 2020). These designs not only include so-called "dark patterns"

that seek to actively mislead or deceive users (Narayanan et al. 2020), but also — and what is likely more significant to freedom of thought — the choice architectures of digital platforms that make some actions easier, more obvious and more automatic than others (Kozyreva, Lewandowsky and Hertwig 2020). For example, most social media platforms make it easy to share content (through integral sharing or upvoting tools) but more difficult to identify its source (since all links within a platform look alike); most encourage engagement with others' posts (through reply and reaction tools) but do not provide the cues such as tone of voice, facial expression and body language that trigger empathy in us and remind us of our shared humanity. These affordances of digital media can lead to a violation of one of the three key elements of freedom of thought, "the right not to have our thoughts and opinions manipulated" (Alegre 2021), as we are nudged toward sharing content without verifying it (which is to say, content that either provokes outrage in us and our audiences, content that reinforces our existing beliefs, or both; see Epstein et al. 2023) and toward interactions with others that are limited to either hostile reaction or shallow agreement (Milli et al. 2023).

The Opacity of Persuasive Design

An essential element of persuasive design is its lack of transparency: because the choices available are "baked in" to the platform's design, we are less likely to question them. This is why a tool's default affordances — the ways of using it that are obvious or seem accepted — are more significant than those affordances which may be available but not as widely used (Davis 2020). This lack of transparency is intensified by the widespread use of algorithms, which are employed by digital platforms not simply to curate content (through means such as sorting, filtering, amplifying, suppressing, targeting and recommending it) but also to make decisions about curating it, whether that is through commissioning content to meet an algorithmically identified audience (Carr 2013) or through funding content creators who have been successful in the algorithmic delivery environment (Pappas 2021). It is possible for consumers to have some insight into the decisions

behind a television network's programming slate, for instance, or the selection and presentation of items in a newspaper (and, indeed, some of the latter have been taking positive steps to be more transparent; see, for example, Tameez 2023). In contrast, decisions made by algorithms are largely opaque. Consumers often have little understanding of how algorithms work (Brisson-Boivin and McAleese 2021) and there is frequently a disconnect between how an algorithm *appears* to work and how it *actually* works: for example, tapping the "heart" icon on a TikTok video does not appear to influence what the platform recommends to you in the future at all (*The Wall Street Journal* 2021). The result can be a reduced sense of agency on users' part (Schaffner et al. 2023) and a use of strategies such as "algospeak" (speaking in euphemisms, such as "unalive," to avoid downranking by the algorithm; see Lorenz 2022), which aim to ward off censorship through self-censorship and, moreover, form a barrier to outreach and organization.

The algorithms used by digital platforms are not only opaque to users: because of the increasing use of machine-learning algorithms (or artificial intelligence [AI]) they are, increasingly, opaque to their operators and designers as well (Mittelstadt et al. 2016). Rather than being designed or programmed, machine-learning algorithms are given an optimization goal (such as "watch time" or "engagement"), trained on a data set, and left to develop their own inputs and rankings. Reinforcement learning takes this a step further by having the algorithm judge its own performance as it operates and modify itself accordingly, so that by the end of a few feedback loops the designers may know nothing about the algorithm except for the optimization goal they gave it (Brown 2021).

To say that digital platforms and algorithms are opaque, however, does not mean that they cannot be critically engaged with. Indeed, their lack of transparency makes it even more important to prepare youth (and all of us) to understand, interrogate and challenge them; for example, even a very basic understanding of algorithms can make a significant difference in the impact they have in people's lives (Klawitter and Hargittai 2018; Brisson-Boivin and McAleese 2021). We do not need to know the specifics of how an image-generation algorithm works to identify and protest biased outputs, nor do we need to understand

on a technical level how DALL-E[1] or Midjourney[2] works to understand the value of lateral reading techniques[3] in identifying AI-generated images. Similarly, while youth participants in MediaSmarts' study on digital platforms' efforts to counter misinformation and disinformation recognized the challenges caused by the opacity of platforms' interfaces and algorithms, after a short primer they were able to critically engage with the topic and develop recommendations for best practices (MediaSmarts 2023b). In this way, users can be prompted to question the affordances of digital platforms and engage in "resistant" uses that are more mindful, less confrontational and more empathetic: "Technologies may affect human life in myriad and sometimes profound ways, yet outcomes are never certain and can be disrupted, thwarted, and circumvented to sometimes surprising ends" (Davis 2020).

Requirements for Critical Engagement

Critical engagement, however, requires two things: digital media literacy must reflect today's environment and there must be a commitment to media education.

The first requirement to allow critical engagement with digital media is to ensure that our model of digital media literacy fully reflects today's networked and digital media environment; media education approaches that remain rooted in the broadcast model, such as the CRAAP test,[4] are not only ineffective but make students less able to do things like evaluating online information (Wineburg et al. 2020).

Effective digital media literacy instruction has been shown to be the difference between "doing your own research" and genuine critical thinking: people who report learning digital media literacy in school are 26 percent less likely to believe in a conspiracy theory, while those who self-identify as "critical thinkers" but have not received formal instruction are 63 percent more likely to believe in them (Reboot Foundation 2022, 3). Effective instruction involves teaching people to be neither blindly cynical of *all* sources, nor to preferentially select information that confirms their former biases, but rather to "teach students to recognize the indicators of trustworthy versus untrustworthy experts and other sources of testimony" (Greene and Yu 2016) to understand how knowledge is produced and evaluated in different disciplines, and to learn different ways of justifying a claim (ibid.).

MediaSmarts' model of digital media literacy (see Figure 1) identifies *access* as both a precondition and a core competency: while it is impossible to be media-literate without affordable and reliable internet access, there are also access skills involved in critically finding and navigating media such as search engines and streaming platforms. Beyond recognizing the necessity of free and equitable internet access, our model of digital media literacy should be updated to recognize that we are no longer just consumers but also users of media; therefore, the core competencies are *using* media tools, *understanding* media through critical interrogation, and *engaging* with and through media as digital citizens.

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1 DALL-E is an AI system that can create realistic images and art from a description in natural language: https://openai.com/dall-e-2.

2 Midjourney is an independent research lab exploring new mediums of thought and expanding the imaginative powers of the human species: www.midjourney.com/home/?callbackUrl=%2Fapp%2F.

3 Lateral reading involves evaluating sites by moving away from the site itself and using digital tools to identify whether a consensus of other sources consider it to be reliable. The lateral reading strategies covered in MediaSmarts' Break the Fake (breakthefake.ca) program include using fact-checking tools such as Snopes; using tools such as links, search engine searches or reverse image searches to find the original source; evaluating whether the source is generally seen as reliable; and consulting sources known to be reliable to get accurate information on the topic.

4 CRAAP stands for currency, relevance, authority, accuracy and purpose. The test provides a list of questions to ask yourself when deciding whether or not a source is reliable and credible enough to use in your academic research paper.

Figure 1: Digital Media Literacy Core Competencies
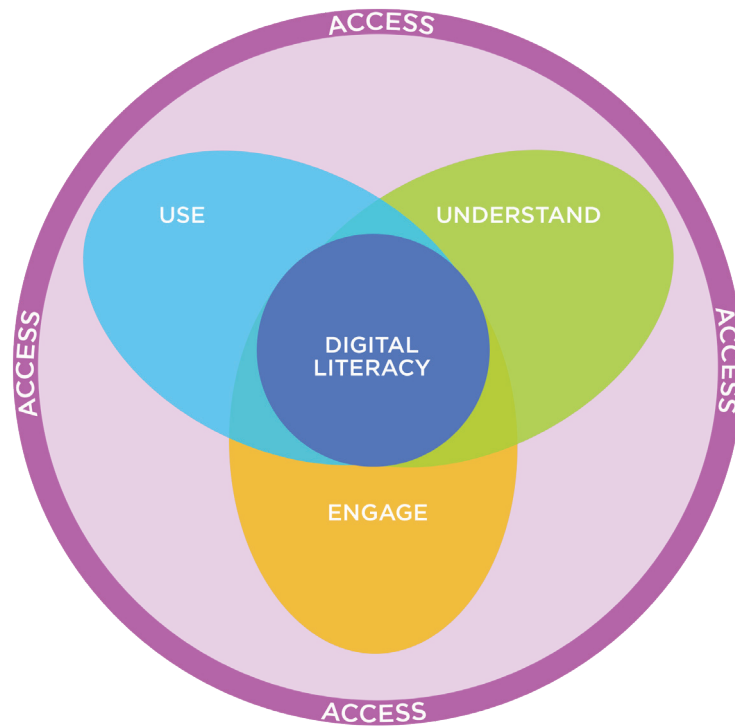
Source: Copyright 2023 MediaSmarts, Ottawa, Canada, www.mediasmarts.ca. Reproduced with permission.

The second requirement is action to push governments at all levels to recommit to media education, for children and young people (at all grade levels) and adults alike. Canada's history of digital policy making has been inconsistent. Between commitments to provide internet access such as the SchoolNet program at the federal level (Darragh 2018) and leadership in integrating media education into provincial curricula (Tsvietkova, Beskorsa and Pryimenko), Canada was once a world leader in promoting digital media literacy. The SchoolNet program, however, was terminated in 2006, and there have been only very limited initiatives taking its place; in provincial and territorial curricula, meanwhile, "the bloom has come off the rose despite early enthusiasm and uptake" (DeWaard and Hoechsmann 2020, 364). Outside of the educational context, digital strategy policy making — from the Information Highway Advisory Council (1994–1997), to the National Broadband Task Force (2001), to the Telecommunications Policy Review Panel (2005–2006), to Digital Canada 150 (2010–2015) — has prioritized digital infrastructure and access

to devices (McAleese and Brisson-Boivin 2022, 7). As a result, the internet has been positioned as part of essential national infrastructure, while digital media literacy has largely (and erroneously) become synonymous with technical fluency.[5] While some recent policy efforts, such as the Digital Citizen Initiative,[6] have shifted the focus toward civic engagement and citizen-focused activities, these initiatives provide "time-limited financial assistance"[7] and lack the coherence of a genuine digital media literacy strategy. Tellingly, when Canada was first included in the Open Society Institute's Media Literacy Index in 2022, it ranked seventh behind countries such as Ireland, Estonia, Denmark and Finland (Lessenski 2022).

Finland, the country that routinely ranks first on the index, takes an approach to media

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5   See https://ised-isde.canada.ca/site/high-speed-internet-canada/en.

6   See www.canada.ca/en/canadian-heritage/services/online-disinformation.html.

7   See www.canada.ca/en/canadian-heritage/services/online-disinformation/digital-citizen-contribution-program.html.

education that is reminiscent of that advocated by Canadian educators since the 1980s. First, it takes a comprehensive approach: rather than focusing exclusively on a single topic, it states, in the words of Leo Pekkala, deputy director of the Finnish National Audiovisual Institute, that "recognising disinformation is important, but that is only a small part of media education…. Media literacy is like learning a language, so you have both the technical skill to use media and the ability to understand it" (quoted in Cord 2022). Second, in Finland, media education is not treated only as a stand-alone course, or included in a single subject, but is integrated across the curriculum — so that mathematics includes studying how statistics are manipulated; art, how ads make visual appeals; history, how propaganda works (Benke and Spring 2022).

persuasive design, it is more vital than ever to ensure that all Canadians have the skills, knowledge and understanding they need to be active and engaged digital citizens. Moreover, as the largely unchecked spread of disinformation, hate speech and violent content have led to increasing support for government action to regulate online speech (St. Aubin and Liedke 2023), a commitment to digital media literacy as a solution is an essential counterbalance to calls for censorship and limits to freedom of thought and expression.

Conclusion: A Leadership Role for Government

Perhaps the most important thing that Canada can learn from Finland is simply the leadership role taken by its national government. MediaSmarts' research has underlined the importance of developing a national strategy in Canada to promote media education and digital media literacy that would be:

→ inclusive of underserved groups such as Indigenous and racialized communities, people with disabilities, seniors, and people living in rural and remote communities;

→ conceptualized as lifelong learning and delivered through communities as well as in schools;

→ supported and delivered through collaboration between federal and provincial/territorial governments, with adequate and sustainable funding; and

→ include ongoing evaluation and modification to identify and disseminate best practices and respond to future changes in the media landscape (McAleese and Brisson-Boivin 2022).

With digital media increasingly being both *how* and *where* civic engagement takes place, along with the increasing opacity of algorithmic and

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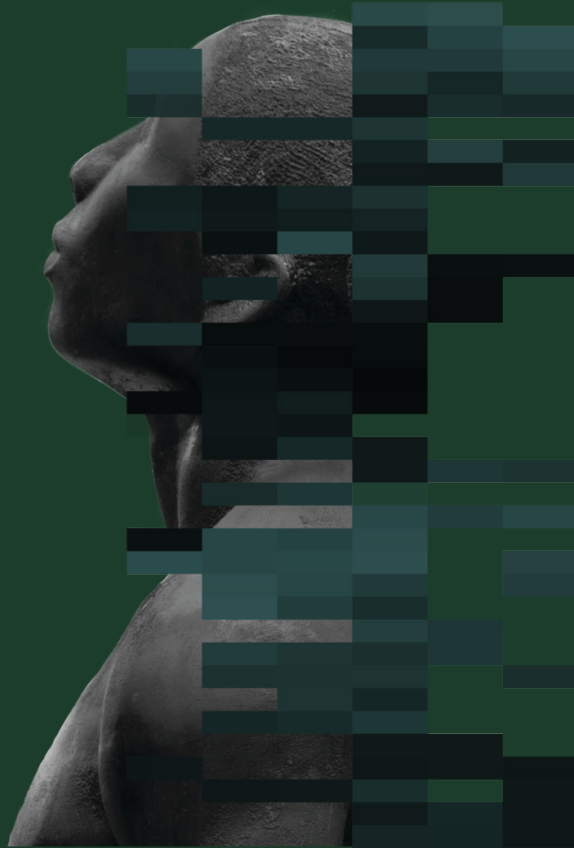
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